

Release notes for ENDF/B Development photoat-013_A1_000
evaluation

ENDF
B-VII.dev

October 13, 2016

- checkr Warnings:

1. A previous error halted parsing of the current section
MAT=1300, MF= 1, MT=451 (1): Parsing stopped

```
ERROR(S) FOUND IN MAT=1300, MF= 1, MT=451
SECTION CANNOT BE CHECKED FROM SEQUENCE NUMBER      150 TO      169
```

- checkr Errors:

1. A variable is outside the allowed ENDF range
MAT=1300, MF= 1, MT=451 (0): Variable range

```
ERROR(S) FOUND IN MAT=1300, MF= 1, MT=451
MOD =      3 OUT OF RANGE      0 -      1      RECORD NUMBER      150
```

2. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=1300, MF=23, MT=501 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=1300, MF=23, MT=501
SECTION 23/501 NOT IN DIRECTORY      RECORD NUMBER      171
```

3. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=1300, MF=23, MT=502 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=1300, MF=23, MT=502
SECTION 23/502 NOT IN DIRECTORY      RECORD NUMBER      810
```

4. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=1300, MF=23, MT=504 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=1300, MF=23, MT=504
SECTION 23/504 NOT IN DIRECTORY      RECORD NUMBER      1111
```

5. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=1300, MF=23, MT=515 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=1300, MF=23, MT=515
SECTION 23/515 NOT IN DIRECTORY      RECORD NUMBER      1152
```

6. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=1300, MF=23, MT=516 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=1300, MF=23, MT=516
SECTION 23/516 NOT IN DIRECTORY      RECORD NUMBER      1184
```

7. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=1300, MF=23, MT=517 (0): Directory (b)

- | | | |
|---|---------------|------|
| ERROR(S) FOUND IN MAT=1300, MF=23, MT=517 | RECORD NUMBER | 1232 |
| SECTION 23/517 NOT IN DIRECTORY | | |
8. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=1300, MF=23, MT=522 (0): Directory (b)
- | | | |
|---|---------------|------|
| ERROR(S) FOUND IN MAT=1300, MF=23, MT=522 | RECORD NUMBER | 1269 |
| SECTION 23/522 NOT IN DIRECTORY | | |
9. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=1300, MF=23, MT=534 (0): Directory (b)
- | | | |
|---|---------------|------|
| ERROR(S) FOUND IN MAT=1300, MF=23, MT=534 | RECORD NUMBER | 1542 |
| SECTION 23/534 NOT IN DIRECTORY | | |
10. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=1300, MF=23, MT=535 (0): Directory (b)
- | | | |
|---|---------------|------|
| ERROR(S) FOUND IN MAT=1300, MF=23, MT=535 | RECORD NUMBER | 1568 |
| SECTION 23/535 NOT IN DIRECTORY | | |
11. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=1300, MF=23, MT=536 (0): Directory (b)
- | | | |
|---|---------------|------|
| ERROR(S) FOUND IN MAT=1300, MF=23, MT=536 | RECORD NUMBER | 1602 |
| SECTION 23/536 NOT IN DIRECTORY | | |
12. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=1300, MF=23, MT=537 (0): Directory (b)
- | | | |
|---|---------------|------|
| ERROR(S) FOUND IN MAT=1300, MF=23, MT=537 | RECORD NUMBER | 1647 |
| SECTION 23/537 NOT IN DIRECTORY | | |
13. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=1300, MF=23, MT=538 (0): Directory (b)
- | | | |
|---|---------------|------|
| ERROR(S) FOUND IN MAT=1300, MF=23, MT=538 | RECORD NUMBER | 1693 |
| SECTION 23/538 NOT IN DIRECTORY | | |
14. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=1300, MF=23, MT=539 (0): Directory (b)
- | | | |
|---|---------------|------|
| ERROR(S) FOUND IN MAT=1300, MF=23, MT=539 | RECORD NUMBER | 1775 |
| SECTION 23/539 NOT IN DIRECTORY | | |
15. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=1300, MF=23, MT=540 (0): Directory (b)

ERROR(S) FOUND IN MAT=1300, MF=23, MT=540
SECTION 23/540 NOT IN DIRECTORY RECORD NUMBER 1832

16. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=1300, MF=27, MT=502 (0): Directory (b)

ERROR(S) FOUND IN MAT=1300, MF=27, MT=502
SECTION 27/502 NOT IN DIRECTORY RECORD NUMBER 1891

17. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=1300, MF=27, MT=504 (0): Directory (b)

ERROR(S) FOUND IN MAT=1300, MF=27, MT=504
SECTION 27/504 NOT IN DIRECTORY RECORD NUMBER 1945

18. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=1300, MF=27, MT=505 (0): Directory (b)

ERROR(S) FOUND IN MAT=1300, MF=27, MT=505
SECTION 27/505 NOT IN DIRECTORY RECORD NUMBER 2000

19. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=1300, MF=27, MT=506 (0): Directory (b)

ERROR(S) FOUND IN MAT=1300, MF=27, MT=506
SECTION 27/506 NOT IN DIRECTORY RECORD NUMBER 2127

• fudge-4.0 Warnings:

1. generic warning message
reaction label 0: Al + gamma [coherent] / Product: gamma (Error # 0): Warning
2. FIXME: Generic fudge unimplemented message
reaction label 0: Al + gamma [coherent] / Product: gamma (Error # 2): Generic unimp (c)

WARNING: coherentScattering is not a valid distribution component for 2-body reaction

3. generic warning message
reaction label 1: Al + gamma [incoherent] / Product: gamma (Error # 0): Warning
4. FIXME: Generic fudge unimplemented message
reaction label 1: Al + gamma [incoherent] / Product: gamma (Error # 2): Generic unimp (c)

WARNING: incoherentScattering is not a valid distribution component for 2-body reaction

WARNING: Checking not yet implemented for piecewise type data

5. Cross sections do not correctly sum up properly according to an ENDF (or equivalent) sumrule
summedReaction label 11: total (Error # 0): Sumrule

WARNING: Cross section does not match sum of linked reaction cross sections! Max diff: 100.00%

6. Cross sections do not correctly sum up properly according to an ENDF (or equivalent) sumrule
summedReaction label 13: photoelectric absorption (Error # 0): Sumrule

WARNING: Cross section does not match sum of linked reaction cross sections! Max diff: 84.09%

• fudge-4.0 Errors:

1. Calculated and tabulated thresholds don't agree
reaction label 0: Al + gamma [coherent] / Cross section: (Error # 0): Threshold mismatch

WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 1. eV!

2. 2-body reaction not in center-of-mass frame
reaction label 0: Al + gamma [coherent] / Product: gamma (Error # 1): 2-body not in COM

WARNING: 2-body reaction not in center-of-mass frame!

3. Calculated and tabulated thresholds don't agree
reaction label 1: Al + gamma [incoherent] / Cross section: (Error # 0): Threshold mismatch

WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 1. eV!

4. 2-body reaction not in center-of-mass frame
reaction label 1: Al + gamma [incoherent] / Product: gamma (Error # 1): 2-body not in COM

WARNING: 2-body reaction not in center-of-mass frame!

5. Energy range of data set does not match cross section range
reaction label 1: Al + gamma [incoherent] / Product: gamma / Distribution incoherentScattering - piecewise: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (0.0 -> 1000000000.0) vs (1.0 -> 1e+11)

6. Calculated and tabulated thresholds don't agree
reaction label 2: e- + e+ + Al [electron field] / Cross section: (Error # 0): Threshold mismatch

WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 2.044e6 eV!

7. Calculated and tabulated thresholds don't agree
reaction label 3: e- + e+ + Al [nuclear field] / Cross section: (Error # 0): Threshold mismatch

WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 1.022e6 eV!

8. Calculated and tabulated thresholds don't agree
reaction label 4: $e^- + Al1s1/2$ / Cross section: (Error # 0): Threshold mismatch

WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 1549.9 eV!
9. Calculated and tabulated thresholds don't agree
reaction label 5: $e^- + Al2s1/2$ / Cross section: (Error # 0): Threshold mismatch

WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 119.05 eV!
10. Calculated and tabulated thresholds don't agree
reaction label 6: $e^- + Al2p1/2$ / Cross section: (Error # 0): Threshold mismatch

WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 81.2 eV!
11. Calculated and tabulated thresholds don't agree
reaction label 7: $e^- + Al2p3/2$ / Cross section: (Error # 0): Threshold mismatch

WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 80.73 eV!
12. Calculated and tabulated thresholds don't agree
reaction label 8: $e^- + Al3s1/2$ / Cross section: (Error # 0): Threshold mismatch

WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 10.16 eV!
13. Calculated and tabulated thresholds don't agree
reaction label 9: $e^- + Al3p1/2$ / Cross section: (Error # 0): Threshold mismatch

WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 4.88 eV!
14. Calculated and tabulated thresholds don't agree
reaction label 10: $e^- + Al3p3/2$ / Cross section: (Error # 0): Threshold mismatch

WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 4.87 eV!
15. Calculated and tabulated thresholds don't agree
summedReaction label 11: total / Cross section: (Error # 0): Threshold mismatch

WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 1. eV!
16. Calculated and tabulated thresholds don't agree
summedReaction label 12: pair product / Cross section: (Error # 0): Threshold mismatch

WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 1.022e6 eV!
17. Calculated and tabulated thresholds don't agree
summedReaction label 13: photoelectric absorption / Cross section: (Error # 0): Threshold mismatch

WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 4.87 eV!